

WHAT IS CLAIMED IS:

1. An asymmetric chiral labeled glycerol including at least one chiral atom, from one to two ^{13}C atoms and from zero to four deuterium atoms bonded directly to a carbon atom.
2. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (2S) [1,2- $^{13}\text{C}_2$]glycerol and (2R) [1,2- $^{13}\text{C}_2$]glycerol.
3. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (2S) [1- ^{13}C , 2- ^2H]glycerol and (2R) [1- ^{13}C , 2- ^2H]glycerol.
4. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (2S, 3S) [1,2- $^{13}\text{C}_2$, 3- ^2H]glycerol, (2R, 3R) [1,2- $^{13}\text{C}_2$, 3- ^2H]glycerol, (2S, 3R) [1,2- $^{13}\text{C}_2$, 3- ^2H]glycerol and (2R, 3S) [1,2- $^{13}\text{C}_2$, 3- ^2H]glycerol.
5. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (2S) [1,2- $^{13}\text{C}_2$, 3- ^2H]glycerol and (2R) [1,2- $^{13}\text{C}_2$, 3- ^2H]glycerol.
6. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (2S) [1,2- $^{13}\text{C}_2$, 3- $^2\text{H}_2$]glycerol and (2R) [1,2- $^{13}\text{C}_2$, 3- $^2\text{H}_2$]glycerol.
7. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (2S) [1- ^2H , 2- ^{13}C]glycerol and (2R) [1- ^2H , 2- ^{13}C]glycerol.
8. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (2S) [1- $^2\text{H}_2$, 2- ^{13}C]glycerol and (2R) [1- $^2\text{H}_2$, 2- ^{13}C]glycerol.
9. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (1S, 2S) [1- ^{13}C , 1- ^2H]glycerol, (1R, 2R) [1- ^{13}C , 1- ^2H]glycerol, (1S, 2R) [1- ^{13}C , 1- ^2H]glycerol and (1R, 2S) [1- ^{13}C , 1- ^2H]glycerol.

10. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (1R, 2R) [1-¹³C, 1,2-²H₂]glycerol, (1S, 2S) [1-¹³C, 1,2-²H₂]glycerol, (1S, 2R) [1-¹³C, 1,2-²H₂]glycerol and (1R, 2S) [1-¹³C, 1,2-²H₂]glycerol.

11. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (1R, 2R) [1-¹³C, 1,3-²H₃]glycerol, (1S, 2S) [1-¹³C, 1,3-²H₃]glycerol, (1S, 2R) [1-¹³C, 1,3-²H₃]glycerol and (1R, 2S) [1-¹³C, 1,3-²H₃]glycerol.

12. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (1R, 2R) [1-¹³C, 1,2,3-²H₄]glycerol, (1S, 2S) [1-¹³C, 1,2,3-²H₄]glycerol, (1S, 2R) [1-¹³C, 1,2,3-²H₄]glycerol and (1R, 2S) [1-¹³C, 1,2,3-²H₄]glycerol.

13. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (1R, 2R) [1,2-¹³C₂, 1-²H]glycerol, (1S, 2S) [1,2-¹³C₂, 1-²H]glycerol, (1S, 2R) [1,2-¹³C₂, 1-²H]glycerol and (1R, 2S) [1,2-¹³C₂, 1-²H]glycerol.

14. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (1R, 2R) [1,2-¹³C₂, 1,2-²H₂]glycerol, (1S, 2S) [1,2-¹³C₂, 1,2-²H₂]glycerol, (1S, 2R) [1,2-¹³C₂, 1,2-²H₂]glycerol and (1R, 2S) [1,2-¹³C₂, 1,2-²H₂]glycerol.

15. The asymmetric chiral labeled glycerol of claim 1 wherein said glycerol is selected from the group consisting of (1R, 2R) [1,2-¹³C₂, 1,3-²H₃]glycerol, (1S, 2S) [1,2-¹³C₂, 1,3-²H₃]glycerol, (1S, 2R) [1,2-¹³C₂, 1,3-²H₃]glycerol and (1R, 2S) [1,2-¹³C₂, 1,3-²H₃]glycerol.

16. The asymmetric chiral labeled glycerol of claim 2 wherein said glycerol is selected from the group consisting of (1R, 2R) [1,2-¹³C₂, 1,2,3-²H₄]glycerol, (1S, 2S) [1,2-¹³C₂, 1,2,3-²H₄]glycerol, (1S, 2R) [1,2-¹³C₂, 1,2,3-²H₄]glycerol and (1R, 2S) [1,2-¹³C₂, 1,2,3-²H₄]glycerol.

17. The asymmetric chiral labeled glycerol of claim 2 wherein said compound includes one or more deuterium atoms.